

REMARKS

The above amendment with the following remarks is submitted to be fully responsive to the Office Action of January 31, 2007. Reconsideration of this application in light of the amendment and the allowance of this application are respectfully requested.

Claims 1-29 were pending in the present application prior to the above amendment, claims 13-20, 28 and 29 having been withdrawn. In response to the Office Action, claims, 10, 11 and 26 have been amended, and new claims 30-33 have been added. Therefore, claims 1-33 are now pending in the present application and are believed to be in proper condition for allowance.

Initially, the Applicants acknowledge with appreciation, the Examiner's indication of allowable subject matter in claim 11 if rewritten in independent form to include all the limitations of the base claim and any intervening claims. In response, claim 11 has been rewritten to be in independent form as suggested by the Examiner, and allowance thereof is respectfully requested.

Referring now to the Office Action, the Examiner has requested update to the current status of related applications. In response, ¶ [0001] of the Specification has been amended to update the status of the related applications.

Referring again to the Office Action, claims 10-12 and 21-27 were rejected under 35 U.S.C. 112, second paragraph, due to lack of antecedent basis in the use of the term “shaft” and “the plurality”. In response, the relevant claims have been amended to overcome this rejection. Therefore, the withdrawal of this rejection is respectfully requested.

Referring again to the Office Action, claims 1-10, 12, and 21-27 were rejected under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 6,086,305 to Lat et al., in view of U.S. Patent No. 6,584,915 to Rogers and U.S. Patent No. 6,422,447 to White et al. The Applicants respectfully disagree for the reasons set forth below.

In the rejection, the Examiner notes that the Lat reference discloses nails for pallets with each nail having a length of 1.25 to 3.5 inches, and a shank diameter of 0.075 to 0.15 inch. However, as conceded by the Examiner, the Lat reference fails to disclose a plurality of surface deformations formed on the shank, or each nail being manufactured from steel wire and attached by an attachment structure. In addition, the Examiner also concedes that the Lat reference fails to disclose the ratio of the head diameter to shank diameter of between 2.70 and 3.37. In this regard, no head diameter, or ratio of the head diameter to the shank diameter, is disclosed in Lat.

In the Office Action, the Examiner cites the Rogers reference for disclosing a nail formed from wire for use in a pallet that has a shank diameter of 3.1 mm which is approximately 0.12 inch and a plurality of deformations on the shank. Moreover, the Examiner cites the White reference for disclosing roofing nails having a shank diameter of approximately 0.12 inch, and a head diameter of 0.35 to 0.438 inch, the nails including an attachment structure. Thus, the Examiner notes that the White reference discloses a ratio of the head diameter to the shank diameter of approximately 2.92 which is between the 2.70 and 3.37 ratio claimed. Correspondingly, the Examiner asserts that it would have been obvious to one of ordinary skill to modify the plurality of nails disclosed in Lat to provide the deformation taught by Rogers, and to have the ratio of the head diameter to the shank diameter of 2.92 as disclosed in White. The Applicants respectfully disagree.

The Examiner, in making this obviousness rejection based on Lat, Rogers, and White references, is essentially picking and selecting dimensions of different nails that have been approved for different applications, and combining these dimensions from different nails to derive the present invention, even though there is absolutely no reason for one of ordinary skill in the art to do so. In this regard, the Applicants respectfully disagree with the Examiner's finding of obviousness and contend that one of ordinary skill would not selectively combine these references in the manner suggested by the Examiner to result in the invention claimed.

Finding one nail in the art with the recited shank diameter and length, and a different nail with recited surface deformations, and yet another nail having the recited ratio between the head diameter to the shank diameter, is not difficult in view of the fact that different nails for different applications come in a variety of different sizes. However, the present invention recites a steel nail suitable for use in a pallet that has a specific length range and a specific shank diameter range, and further recites a specific ratio between the head diameter to the shank diameter. The nail recited in the presently rejected claims is neither disclosed, nor rendered obvious by the cited references in that there is absolutely no motivation to one of ordinary skill in the art to modify the disclosed nails, or combine these references in the manner suggested in the Office Action, and the Examiner does not establish any motivation for doing so.

To the contrary, the references of record clearly teach away from modifications of nails. In this regard, it should be understood by the Examiner that in the nail art, nails are generally not used interchangeably for different applications. Instead, nails are specifically designed and approved for use in a specific application to ensure that the nails are suitable for the specific application. Evidence of this is most clearly shown in Standard Specification for Driven Fasteners ASTM F1667 (hereinafter “ASTM F1667 Standard”) already of record. The ASTM F1667 Standard tabulates various nails of different dimensions which are approved for use in the specifically identified applications set forth therein.

Thus, a person of ordinary skill in the art that is seeking to utilize an approved nail for a particular application would refer to the ASTM F1667 Standard to identify the table that sets forth the desired application, and would select from the listing of nails that are set forth in the table associated with the desired application. Correspondingly, the ASTM F1667 Standard clearly teaches away from customization or modifications to nails set forth since the Standard already provides for the user, numerous approved nail choices having various dimensions and proportions for each specific application. Clearly, there is no motivation for a

person of ordinary skill in the art to modify a nail, such as that disclosed in Lat or Rogers references which are approved for pallet use, to have modified dimensions of another nail that is approved for use in a completely different application such as the roofing nails disclosed in White.

Thus, in view of the above, the Applicants respectfully contend that the present invention would not be obvious, and that one of ordinary skill would not modify the nails disclosed in Lat or Rogers to have a head diameter of an unrelated roofing nail disclosed in White et al. Correspondingly, the withdrawal of this rejection, and the allowance of claims 1-10, 12, and 21-27 are respectfully requested.

In further support of the non-obviousness, facts concerning the performance benefits and commercial success of pallet nails of the present invention are set forth herein below. In particular, sales of conventional pallet nails manufactured by Stanley Bostitch (assignees of the present invention) were in steady decline from 1999. These conventional pallet nails are 2.0 inches in length, and have a 0.099 inch shank diameter. The total unit sales volume for conventional pallet nails declined from a peak of approximately 410,000 units in 1999, to approximately 213,000 units in 2006, each unit representing a box of 9000 nails. Likewise, the total sales dollars of conventional pallet nails with 0.099 inch shank diameter decreased from approximately \$12,000,000 in 1999, to approximately \$5,200,000 in 2006.

The negative impact of the above described decline in sales of the conventional pallet nails on profitability of Stanley Bostitch was compounded by the fact that the Gross Margin of these conventional pallet nails had been reduced to 20% in order to compete with pallet nails of other manufacturers, thereby making these conventional pallet nails not very profitable for Stanley Bostitch.

In January of 2005, pallet nail FC6DS084BD-PP in accordance with the present invention having 0.084 inch shank diameter was introduced by Stanley Bostitch. Because it is a thinner nail having a shank diameter which reduces the

steel volume of the nail by approximately 28% as compared to the conventional pallet nail, this nail was not immediately accepted in the market place. People in industry and ordinary skill in the art did not believe that the thinner nail would perform as well as conventional pallet nails having thicker shank diameter. However, laboratory tests conducted by Stanley Bostitch and industry leading laboratory, Virginia Tech's Center for Unit Load Design, have shown that the smaller FC6DS084BD-PP pallet nails of the present invention, which have a 0.084 inch shank diameter, perform just as well as the conventional pallet nails. The equivalent performance is primarily due to the higher ratio of the head diameter to the shank diameter which results in a larger area of contact between the pallet deckboard and underneath the head of the nail.

Once the pallet manufacturers were informed of the equivalent level of performance, the sale of the FC6DS084BD-PP pallet nail increased substantially between June and August of 2005, and has enjoyed continued success in the market place. Since its introduction in January 2005, over \$3,000,000 of the reduced shank diameter FC6DS084BD-PP pallet nail has been sold. Importantly, due to the smaller shank diameter, smaller steel wire is used to manufacture the FC6DS084BD-PP pallet nail. Correspondingly, this allows realization of higher Gross Margin of 37% for the FC6DS084BD-PP pallet nail, thereby increasing profitability of Stanley Bostitch. The loss of sales of conventional pallet nails has also been partially offset by the sales of the FC6DS084BD-PP pallet nails of the present invention.

Thus, the FC6DS084BD-PP pallet nail has been a tremendous commercial success since its introduction, helping in maintaining market share of pallet nails for Stanley Bostitch while increasing profitability at the same time. Clearly, the above described commercial success of the present invention establishes the nonobviousness of the present invention.

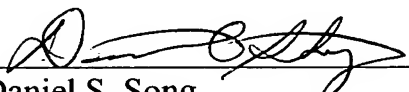
Furthermore, various other advantages of the smaller FC6DS084BD-PP pallet nails in accordance with the present invention have been identified

contributing to its continued acceptance and commercial success. In particular, the smaller shank diameter has been found to reduce pallet deckboard splitting which can occur during pallet construction. Furthermore, because the nail is smaller, smaller fastener driving tools can be used to drive such nails. Because the nail and the required driving tool are smaller, they are substantially lighter, resulting in less fatigue for the users, thereby increasing productivity of the workers that fabricate the pallets. These additional advantages of the FC6DS084BD-PP pallet nails in accordance with the present invention are attributable to the performance benefits provided by the proportions of the pallet nail recited in the claims of the present application.

The above described performance and commercial success of the FC6DS084BD-PP pallet nails are set forth in the DECLARATION of inventor Dr. Edward Sutt, Jr. which is submitted herewith for consideration. In this regard, the Examiner is respectfully reminded that the U.S. Supreme Court has mandated consideration of secondary evidence in determining obviousness or nonobviousness of an invention to a person of ordinary skill in the art. Thus, the Supreme Court has noted that “[s]uch secondary considerations as commercial success, long felt but unsolved needs, failures of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented. As indicia of obviousness or nonobviousness, these inquiries may have relevancy. . .” (Graham v. John Deere, 383 U.S. 1, 148 USPQ 459 (1966)). The U.S. Patent and Trademark Office has also instructed Examiners that “[o]bjective evidence or secondary considerations such as unexpected results, commercial success, long-felt need, failure of others, copying by others, licensing, and skepticism of experts are relevant to the issue of obviousness and must be considered in every case in which they are present.” (See MPEP § 2141 *citing* Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); Hybritech, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 USPQ 81 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987)).

Thus, in view of the above, the Applicants respectfully request full consideration of the evidence of commercial success that clearly establishes nonobviousness of the present invention. In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. However, if any issue remains after considering this response, the Examiner is invited to call the undersigned to expedite the prosecution and work out any such issue by telephone.

Respectfully submitted,


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